Amendment to the Claims:

This listing of claims replaces, without prejudice, all previous versions and listings of claims in the application.

Claims 1-24 (Canceled).

25.   (Currently amended) Method for assessing an integrity of a structure, comprising the steps of:

i)   collecting data relating to initial dimensions of the structure,

ii)   creating a computer model of the structure using the data relating to the initial dimensions of the structure,

iii)   collecting data relating to an estimated load on the structure,

iv)   collecting data relating to known defects of the structure and thereafter using said defect data, the computer model of the structure and the load data for defining areas which are subject to relatively high loads,

v)   analyzing by computer simulation the structure, using the computer model of the structure and the load data, in order to define areas which are subject to relatively high stresses,

v) vi)   measuring, after a time interval, dimensions of the structure in high stress areas,

vi) vii)   updating the computer model of the structure, using data corresponding to the data collected in step i) and relating to the results of step v) vi) instead of or in addition to the data collected in step i),

vii) viii)   re-analysing the structure, using the updated computer model and the load data, in order to calculate a value for the integrity of the structure and outputting the calculated value.

26.   (Currently amended) Method according to claim 25, wherein the method comprises the step of:

viii) ix)   repeating one or more times steps v) vi), vi) vii) and vii) viii).

27.   (Currently amended) Method according to claim 25, wherein the method comprises the step of:

~~ix)~~ x)   visualising the ~~value~~ calculated <u>value</u> in step ~~vii)~~ <u>viii)</u>.

28.   (Currently amended) Method according to claim 27, wherein the method comprises the steps of:

~~x)~~ <u>xi)</u>   measuring an actual load on the structure,

~~xi)~~ <u>xii)</u> updating the data relating to the load on the structure, and thereafter

~~xii)~~ <u>xiii)</u>   re-analysing the structure, using the computer model and the updated load data, in order to calculate a value for the integrity of the structure, and updating the <u>areas which are subject to relatively high stress</u>.

29.   (Currently amended) Method according to claim 28, wherein the method comprises the step of:

~~xiii)~~ <u>xiv)</u>   repeating one or more times steps ~~x)~~ <u>xi)</u>, ~~xi)~~ <u>xii)</u> and ~~xii)~~ <u>xiii)</u>.

30.   (Currently amended) Method according to claim 28, wherein the method comprises the step of:

~~xiv)~~ <u>xv)</u>   visualising the results of step ~~xii)~~ <u>xiii)</u>.

31.   (Currently amended) Method according to claim 25, wherein the method comprises the step of installing, after step ~~iv)~~ <u>v)</u>, in high stress areas, a first set of sensors for measuring the dimensions of the structure in said high stress areas.

32.   (Currently amended) Method according to claim 25, wherein the method comprises the step, of installing, after step ~~iv)~~ <u>v)</u>, in high stress areas, sensors for measuring the load on the structure in said high stress areas.

33.   (Previously presented) Method according to claim 31, wherein the method comprises the step of connecting the sensors to a processing means, such as a computer, for transmitting data from the sensors to the processing means in real time.

34.   (Canceled).

35.   (Currently amended) Method according to claim 25, wherein the method comprises the step of, prior to step i̶v̶)̶ v), estimating a minimum size of defects in the structure and thereafter using said estimated defect data, the computer model of the structure and the load data for defining areas which are subject to relatively high loads.

36.   (Previously presented) Method according to claim 35, wherein the minimum size of the defects is estimated to be equal to a precision of measurement equipment used for measuring the dimensions of the structure.

37.   (Currently amended) Method according to claim 25, wherein the method comprises the step of prior to step i̶v̶)̶ v), collecting data relating to a load history on the structure and thereafter using said load history, the computer model of the structure and the load data for defining areas which are subject to relatively high loads.

38.   (Currently amended) Processing arrangement for assessing an integrity of a structure, provided with processing means, such as a computer, for using data relating to dimensions of the structure, a̶n̶d̶ a load on the structure and known defects data of the structure in a calculation of a value representing the integrity of the structure, wherein the processing arrangement is provided with sensors to measure data r̶e̶l̶a̶t̶i̶n̶g̶ ̶t̶o̶ of the dimensions of the structure, a̶n̶d̶ the load on the structure and data relating to known defects of the structure, the sensors being adapted to transmit said data in real-time, wherein the processing means are provided with receiving means for receiving said data and wherein the processing means are adapted to analyse the data in order to update the calculation of the value representing the integrity of the structure.

39.   (Previously presented) Processing arrangement according to claim 38, wherein the processing arrangement is provided with representation means for visualising t̶h̶e̶ a result of the calculation of the value representing the integrity of the structure.

40.   (Previously presented) Processing arrangement according to claim 38, wherein the sensors are adapted to measure pressure exerted on the structure.

41.   (Previously presented) Processing arrangement according to claim 38, wherein the sensors are adapted to measure temperature.

42.   (Previously presented) Processing arrangement according to claim 38, wherein the sensors are adapted to measure mechanical loading on the structure.

43.   (Previously presented) Processing arrangement according to claim 38, wherein the sensors are adapted to measure fluid loading on the structure.

44.   (Previously presented) Processing arrangement according to claim 38, wherein the sensors are adapted to measure vibration.

45.   (Previously presented) Processing arrangement according to claim 38, wherein the sensors are adapted to measure acceleration experienced by the structure.

46.   (Canceled).

47.   (Previously presented) A computer program product comprising data and instructions that after being loaded by a processing arrangement provides said arrangement with the capacity to carry out a method according to claim 25.

48.   (Previously presented) A data carrier provided with a computer program product according to claim 47.